2. BACKGROUND ON SELF-INSURANCE IN CALIFORNIA AND IMPLICATIONS FOR RETURN TO WORK AND THE REPLACEMENT OF LOST EARNINGS

In this section, we will briefly describe the requirements of self-insurance in California and compare the characteristics of self-insured firms and insured firms. We will then discuss the implications of these characteristics for return to work and for the long-term losses of workers with permanent disability claims at self-insured employers. We will also discuss their implications for the replacement of lost earnings.

Most employers in California purchase workers' compensation insurance from private insurance carriers to cover the costs of indemnity payments, medical expenses and vocational rehabilitation provided to workers injured on the job. The insurance company agrees to pay the claims to the injured workers and charges the employer a premium based on the firm's expected workers' compensation losses. Large firms with many employees are "experience rated," meaning their premiums are adjusted according to the number and size of claims made against them in previous years. Smaller firms are imperfectly experienced rated, or not at all, and their expected premiums are based on the loss experience of their respective industries.[1]

Employers that do not purchase workers' compensation insurance must self-insure.[2] Self-insured employers must cover the costs of compensation for injury out of revenue and assets. In this sense, they are perfectly experience rated. In California, employers that wish to self-insure must obtain a certificate of consent to self-insure from the Department of Industrial Relations (DIR). The DIR will consent when the employer demonstrates "the ability to self-insure and to pay any compensation that may become due to his employees."[3] The regulations require the employer to have a net worth of $5,000,000 and average annual revenue of $500,000 over the past five years.[4] Private employers must also provide an estimate of future liability, and maintain a deposit with the DIR totaling 125 percent of the self insurer's estimated expected future liability

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[1] According to the Workers' Compensation Insurance Rating Bureau, approximately 20 percent of firms are experience rated, accounting for 80 percent of the insured workforce. Experience rating uses a weighted average of the industry (or class) experience and the firm's experience. Larger firms have a higher weight on the firm's experience. In California, no insured firms are 100 percent experience rated.

[2] There are a few employers that are exempt, including casual employment, domestic employment, some volunteer organizations, and independent contractors. Federal employees, railroad employees, and harbor and longshore workers are covered under other federal workers' compensation systems. State agencies are "legally uninsured," though functionally self-insured.

[3] California Labor Code Section, 3700(b)

[4] 8 Cal. Code of Regulations, 15203(b)

for compensation and 10 percent of estimated future legal and administrative costs.[5] This deposit may be no less than $220,000.[6] These conditions are certain to discourage small firms from self-insuring, which is as it should be because small firms would be unlikely to reliably pay all compensation due to their claimants.[7]

Of the over 600,000 employers in California, only about 900 are self-insured. Between 1991 and 1996 there were 898 self-insured firms, including 466 private firms and 432 public agencies.[8] Despite the small number of firms, most of the largest employers in California, and almost all of the public employers, are self-insured. Figure 1 shows the portion of total payroll, workers' compensation claims and employment at self-insured firms and insured firms in California from 1993-1996. Self-insured firms account for about 35 percent of claims. Private self-insured firms account for about 17 percent of employment, while public self-insured agencies account for approximately 12 percent.[9] Self-insured firms also account for a higher number of workers' compensation claims and payroll dollars per employee than do insured firms.

To summarize, private, self-insured firms differ from insured firms in three critical ways. First, they bear the actual cost of their workers' compensation claims while (particularly smaller) insured firms pay the expected cost for a firm in their industry. Second, they are considerably larger. Third, the workers at self-insured firms are paid more than the workers at insured firms. Each of these three characteristics may have an impact on the losses of workers at the firms.

Losses may be lower for workers at self-insured firms because these three characteristics of self-insured employers are related to the success of return to work of their employees after their injuries. The success of an employee's return to work can be measured along several dimensions. Frequently, "better return to work" refers to a shorter duration on temporary disability benefits. In this report, better return to work includes this definition, but it also includes whether the return to work is at the same job, at the same employer, and whether the injured

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[5] California Labor Code, 3701

[6] California Labor Code, 3700.5

[7] It is possible for multiple employers to self-insure as a group. Many school districts have done this, though no private employers in California have.

[8] The data on self-insured firms in this section are from the Self-Insured Plans, part of the Department of Industrial Relations. The definition of a firm for the SIP is the master certificate holders, which includes the parent company and all the subsidiaries that are covered by the self-insurance policy. When characterizing firms in California as a whole, the data are from the Employment Development Department (EDD). These data are based upon Unemployment Insurance reporting units. Many large master certificate holders include multiple UI reporting units. According to EDD, there were 937,164 UI reporting units in 1996. Most of these will have no workers' compensation claims.

employee, after first returning to work, is able to continue participating successfully in the labor force. This last aspect is particularly important for workers with permanent disabilities.

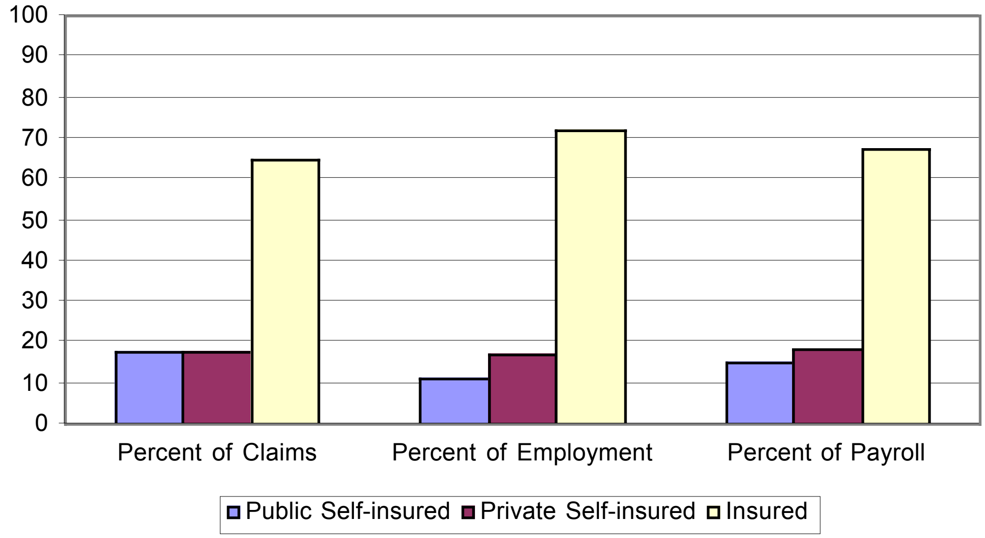

Figure 1—Claims, Employment and Payroll by Firm Type, 1993-1996

Table 1 shows the average pre-injury earnings and the average number of employees working at the employer where the injury occurs for a sample of claims at insured firms and another sample at self-insured firms in California in 1993. These data (which will be described in greater detail in chapter 4 below) are from very large samples drawn from a broad range of employers. The self-insured claims are reported unweighted, but also weighted to represent the population of self-insured claims and the weighted estimates can therefore be considered representative.[10] The insured claims represent approximately two-thirds of a 20 percent random sample of insured claims, and the bias in the two-thirds sample is toward higher earnings and larger employers. Despite this bias, average employment at the firm for the sample of self-insured claims is still seventeen times higher than employment at the firm for the sample of insured claims. The preinjury earnings of claimants at self-insured firms are 50 percent higher.

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[9] The total employment data was collected from the EDD, and the employment at insured firms is inferred by subtracting the employment at self-insured firms from total employment. A small number of illegally uninsured employers would be included as insured in this calculation.

[10] The weighting approach is described in section 5 below and in detail in the appendix.

insured firms pay the expected cost for a firm in their industry. Second, they are considerably larger. Third, the workers at self-insured firms are paid more than the workers at insured firms. Each of these three characteristics may have an impact on the losses of workers at the firms.[11]

Table 1

Average Number of Employees and Quarterly Earnings, Self-insured and Insured firms in California, 1993

	Self-Insured		Insured
	Unweighted	Weighted	
Number of employees	17,698	16,336	1,061
Pre-injury quarterly earnings	9,217	8,709	6,006

Note: Pre-injury quarterly earnings are estimated for injured worker in the quarter immediately prior to the quarter of injury. Number of employees is the average number at the injured workers' firm in the three months during the quarter of injury.

Losses may be lower for workers at self-insured firms because these three characteristics of self-insured employers are related to the success of return to work of their employees after their injuries. The success of an employee's return to work can be measured along several dimensions. Frequently, "better return to work" refers to a shorter duration on temporary disability benefits. In this report, better return to work includes this definition, but it also includes whether the return to work is at the same job, at the same employer, and whether the injured employee, after first returning to work, is able to continue participating successfully in the labor force. This last aspect is particularly important for workers with permanent disabilities.

If an employer bears the full cost of the injury, as self-insured employers do, the incentive for the employer to reduce temporary disability is greater. If this leads employers to adopt more return-to-work programs, the employee may have less time out of work initially, and may even have less subsequent dislocation. This incentive is discussed in Krueger (1990), who showed that the utilization increase associated with a benefit increase in Minnesota was lower at self-insured firms than at insured firms, which would be consistent with self-insured firms' stronger incentives to avoid paying temporary disability benefits, presumably by returning workers to work sooner.[12]

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[11] Conversations with self-insured employers and insurers highlighted another characteristic that may differ between self-insured and insured employers: Self-insured employers have a greater desire for control over the claim. Typically, this desire is greater when the outcome of injury claims are likely to have an impact upon other employer human-resource costs. For example, firms that invest heavily in their employees may wish to avoid losing trained personnel.

[12] While the impact of experience rating on injury rates on the time to return to work has not been extensively examined in the literature, there is a larger literature on the impact of experience rating on injury rates. See, e.g., Boden (1995), Burton and Chelius (1997), and Butler (1994).

The losses associated with a PPD claim at larger firms may be lower because they may be more able to offer modified work to disabled employees. For PPD claimants that do not require modified work, larger firms are also more likely to be able to hold a position during recovery of the worker for a longer period of time, or find a new position if the old one has been filled. Allowing the employee to return to the at-injury employer would reduce dislocation associated with the injury, including the loss of tenure and firm-specific training.

On average, higher paid workers return to work sooner, and therefore we will expect lower losses for higher paid workers. One justification given for the more rapid return to work of higher paid workers is the higher skill level associated with higher wages (Butler, Johnson and Baldwin, 1995; Fenn, 1981; Johnson and Ondrich, 1990). Higher skilled workers typically have more flexibility in their job assignments. Also they are less likely to be engaged in physical labor, and thus likely to be less impaired by a physical disability.

Another explanation given for the shorter duration before first return to work of higher-earnings workers is that in most states, as in California, temporary disability benefits are paid as a fraction of pre-injury earnings up to a maximum level. For workers above the maximum, the fraction of earnings replaced by temporary indemnity benefits (the temporary disability replacement rate) is lower, providing a greater incentive to return to work. Research on the impact of the temporary disability replacement rate has shown that higher temporary disability benefits, on average, lead to a longer duration of temporary disability, though the magnitude of the effect differs considerably across studies (see e.g., Butler and Worrall, 1985; Fenn, 1981; Galizzi and Boden, 1996; Johnson and Ondrich 1990; Meyer, Viscusi, and Durbin, 1995).

Figure 2 shows the distribution of wages for permanent disability claimants in the quarter before injury at insured firms and in our sample of self-insured firms in 1993. The horizontal axis represents quarterly wages in thousands (with the value equal to the maximum, e.g. 4 represents $3001-$4000), and the height of the line represents the percent of workers at each level of wages. For instance, while 13 percent of workers injured at insured firms have quarterly earnings of $4000, only 5 percent of workers injured at self-insured firms earned that amount. At insured firms, a larger fraction receives lower wages, so the self-insured distribution is shifted out to the right of the distribution for insured employers.

Temporary disability in California in 1993 paid two-thirds of the preinjury wage up to a maximum of $336 per week. The vertical line in Figure 2 at $6552 represents the level of quarterly earnings above which workers on temporary disability would no longer be receiving two-thirds replacement. While only 30 percent of the insured have earnings above this amount, 61 percent of the self-insured have earnings above the temporary disability cap. The cap has increased to $490 per week since 1993, but even at this level ($9555), 39% of self-insured claimants in 1993 (and 13 percent of insured claimants) exceeded the cap.

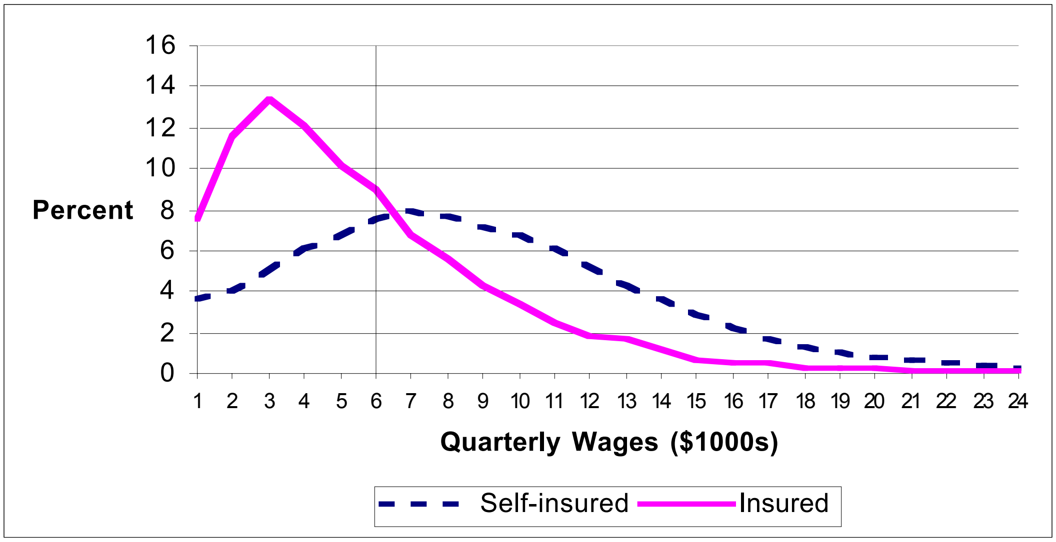

Figure 2—Wage Distribution, Insured vs. Self-Insured, 1993

Employers sometimes provide supplemental income replacement benefits (or salary continuance) to temporarily disabled workers. This practice is often mandated among public employers.[13] While empirical evidence on this practice is not currently available, anecdotal evidence suggests that it is more common among self-insured employers. Typically, there is no cap on this benefit, but it is limited to one year or less. Depending upon how much of the previous earnings are replaced by the salary continuance benefit, it would mitigate or reverse the predicted effect of the workers' compensation TD replacement rate on return to work at self-insured firms.

We have reviewed several characteristics of self-insured firms that are expected to increase return to work, including the impact of perfect experience rating on the incentive of employers to offer return-to-work programs, the ability (due to their size) to offer modified work and to hold a position available for a temporarily disabled worker, and the greater likelihood that their workforce (due to their skill level) will return to work sooner. The cap on benefits may increase return to work, but salary continuance may erase this effect. We expect that increased return to work will reduce losses in the short run. Unless workers return to work sooner than is medically advisable, this should also reduce losses in the long run.

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[13] For instance, California Labor Code Section 4850 requires that police officers and firefighters must be paid 100 percent of the preinjury wage for up to one year while temporarily disabled.

We are interested not only in the losses of PPD claimants, but also in the replacement rate (the fraction of these losses that are replaced by workers' compensation benefits). A simple examination of the temporary disability caps will suggest that for workers above the cap, the replacement rate will be lower, but we have already suggested that because of the payment of salary continuance, replacement rate at self-insured employers may not be lower. It becomes even harder to predict the replacement rate consequences over the longer term. For permanent disability claimants, the labor market consequences are not limited to time out of work while on temporary disability (Butler, Johnson and Baldwin, 1995; Peterson *et al*, 1998; Krause et al (1999). Their time out of work may continue after their temporary disability benefits have been exhausted. They may have to move to a different employer and accept a lower wage, or they may have recurring problems over the years after their injuries. Self-insured employers may have practices that improve all of these subsequent labor market outcomes, thus lowering losses and thereby increasing the replacement rate.

However, practices at self-insured employers and the advantages of greater size and higher earnings must overcome the disadvantage, given higher earnings at self-insured employers, of the TTD cap and even lower pre-injury earnings caps for other benefits paid to PPD claimants. Temporary disability benefits are only a fraction of total benefits received by PPD claimants, which also include permanent partial disability and vocational rehabilitation maintenance allowance (VRMA). VRMA has a cap of $246 per week. PPD in 1993 had a cap of $140 or $148 per week, depending upon the disability rating received. As a result, total indemnity benefits are less responsive to income than temporary disability benefits alone.

Figure 3 shows the total indemnity benefits incurred at self-insured employers in 1993 for workers divided into categories of $1000 of preinjury earnings.[14] The average total indemnity for a worker with quarterly earnings of $3,000–4,000 was $22,848. This amount will replace one and a half years with earnings after the injury. Workers with preinjury quarterly earnings of $8,000–9,000 received $23,324, replacing two-thirds of a year out of work. Workers with pre-injury quarterly earnings of $14,000 received total indemnity of $23,110, replacing less than half a year out of work.

Biddle (1998a, 1998b) showed that the return-to-work experiences of injured workers were better at self-insured firms. In an analysis similar to the one employed in this report, Biddle (1998a) showed that for workers' compensation claimants in Washington state, workers at self-

[14] The incurred data are observed in 1998. For 1993 claims, these data are at five years of maturity, and therefore likely to be a closed claim, at which point incurred data are equal to paid data.

insured firms had a shorter duration of time off work following injury than workers at fund-insured firms.

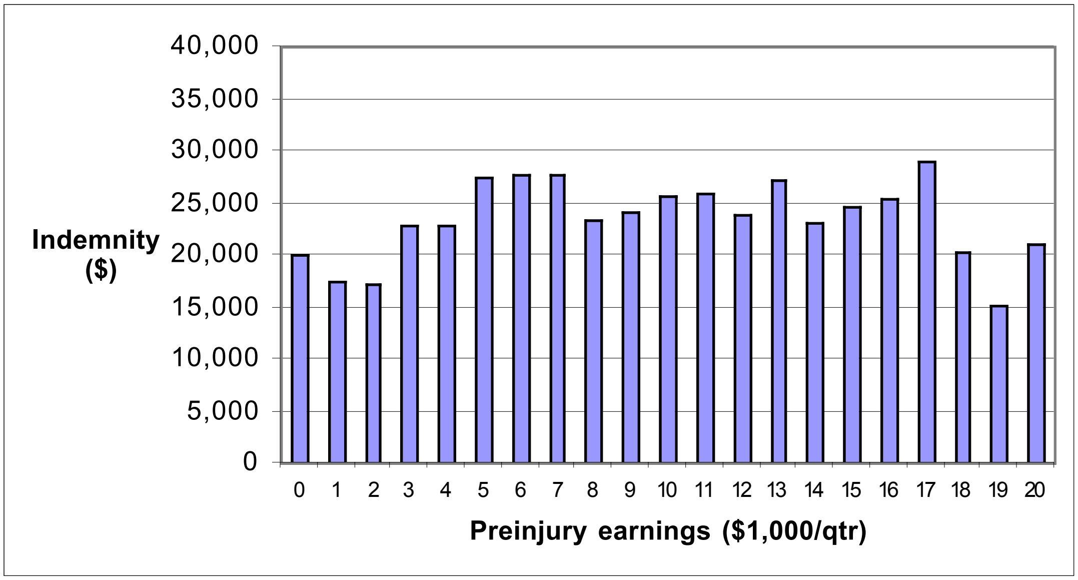

Figure 3—Total Indemnity including PPD, VRMA, and TTD, by Pre-injury Quarterly Earnings, Self-insured Employers, 1993

He also showed that workers injured at self-insured firms have higher rates of post-injury employment over the first few years after injury, though differences decline with time. While for most (non-PPD) claims, the differences between self-insured and insured firms could be explained by demographic and firm characteristics, PPD claims did not fit this pattern. At the same time, Biddle (1998b) showed that, on average, workers injured at self-insured firms have lower replacement rates than workers injured at fund-insured[15] firms.

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[15] Washington has a State Fund, and does not allow private insurers.